

Furtado and Kaldor: The interactions between the Latin American structuralist approach and the Cambridge School

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Abstract

Celso Furtado is treated by many as one of the greatest Latin American economists of all time. Among his various contributions to the field of economic science, his work on economic development stands out. Developing a structuralist economic approach, with the originality of the theoretical contributions that arise from the ECLAC, his approach gathers influence from several sources. One of these sources seems to be the post-Keynesian authors of the Cambridge School, above all Nicholas Kaldor. Most of this article seeks to explain how the theoretical framework developed by Kaldor interacts with Furtado's theoretical developments, in his structuralist economic thought, which sought to understand the process of economic development from the perspective of the periphery. However, as Furtado's economic thought (with his way of understanding economic underdevelopment from the periphery perspective) remains current, in addition, this paper also highlights how the Latin American structuralist approach interacts with current theoretical models of heterodox approaches, one of which is the post-Keynesian one.

Keywords: Furtado; Kaldor; development economics; structuralism; Cambridge School

JEL classification: B20; B31; O10

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1. Introduction

Celso Furtado, born in the northeastern reality of Brazil, graduated from a multitude of experiences: from the Faculty of Law in Rio de Janeiro, where he participated in the construction of the Brazilian state; from his doctoral studies in Paris, where he engaged with historical methods and studies; as an economist at the Economic Commission for Latin America and the Caribbean (ECLAC; known as CEPAL in Latin America Countries), where he denounced underdevelopment; as a researcher in Cambridge, where he incorporated post-Keynesian debates into his classic work *Formação Econômica do Brasil* (*The Economic Growth of Brazil*). Always demonstrating intellectual autonomy, he drew upon these experiences and theoretical influences to construct a powerful critique of Economics and to form his own interpretation of the Brazilian reality.

As highlighted by Boianovsky (2023), Celso Furtado (1920-2004) stands out as one of the most prominent Brazilian economists in the history of economic thought (possibly the most prominent). Furtado is featured in the first three editions of Blaug's book *Who's Who in Economics*. Additionally, he is highlighted in *The New Palgrave Dictionary of Economics* (Boianovsky, 2008). Furthermore, he establishes himself as one of the “pioneers in development”, being one of the contributing authors to the two-volume work on the subject organized by the World Bank (Furtado, 1987), this work gathers contributions of important authors in the field of development economics.

As the author of influential works such as *Formação Econômica do Brasil* (*The Economic Growth of Brazil*) and *Desenvolvimento e subdesenvolvimento* (*Development and underdevelopment*), even when history and economic theory were mobilized in opposing directions, his contributions consistently aimed at understanding the dynamics, limits, and challenges of economic development. In this sense, his method and interpretation of economics should be understood in the context of his interdisciplinary intellectual development and life experience marked by contrasting realities, between Rio de Janeiro and the Northeast of Brazil, between the center and the periphery, and between development and underdevelopment.

As one of the most relevant Latin American structuralist economists, numerous studies have been dedicated to the theoretical debates of Celso Furtado. There are excellent summaries of the contributions of the Brazilian economist to Latin American structuralism (Bielschowsky, 1995; 2000; Mallorquin, 1995; Love, 2001; Bresser Pereira, 2001; Boianovsky, 2010). More recent contributions focus on how the historical method was adopted by Celso Furtado (Silva, 2011; 2015; 2021; Boianovsky, 2015), while there are fewer studies that seek to deepen the analysis of Furtado's historical structural method (Fonseca, 2021; Domingues and Fonseca, 2021; Saes and Soares, 2021; Araújo, 2022).

In the process of constructing an alternative interpretation of development theory, his biography includes two significant periods at the University of Cambridge: 1957-1958, when he wrote *The Economic Growth of Brazil*, and 1973-1974 when he wrote parts of *O mito do desenvolvimento econômico* (*The myth of economic development*). These two sabbatical periods allowed him to deepen his studies and solidify his accumulated knowledge.

During his first stay at the English university, he was embraced by the leading members of the so-called “Cambridge School”, whose post-Keynesian economists – Richard Kahn, Joan Robinson, Nicholas Kaldor, and Piero Sraffa³ – also instilled deep reflections on economic theory in Furtado. According to his diaries, on May 17, 1958, Celso Furtado stated:

I want to write a major work on the recent development (the last ten years) of “economic dynamics”, particularly the contributions of Harrod, Joan Robinson, and Kaldor. I have been dedicating myself exclusively to reading. In the first few months, the book [*Formação Econômica do Brasil*] took up a lot of my time, and now I am impatient to catch up on my reading program (Furtado, 2019, p. 149).

³ About the Cambridge School see Pasinetti (2005).

Interactions with the theories of Keynesian authors like Alvin Hansen, Harrod, and Domar were already present in his essays of the early 1950s, later consolidated in the first part of *Desenvolvimento e subdesenvolvimento* in 1961. The book's fourth chapter, written as a monograph for the chair competition at the Faculty of Law of the University of Brazil in 1958, explicitly mentioned contributions assimilated in Cambridge, referencing some works by Nicholas Kaldor and Joan Robinson. These reflections on development theory continued in Furtado's agenda throughout the decade, culminating in new formulations in 1967 with *Teoria e Política do Desenvolvimento Econômico* (*Theory and Policy of the Economic Development*)⁴.

In the 1970s, *Teoria e Política* underwent significant changes in new editions, deepening Furtado's approach to aspects of the post-Keynesian theory of Cambridge, emphasizing the need for the “dynamization” of the Keynesian model. This dialogue with the contributions of his English colleagues, combined with his view of the historical process of peripheral economies, may have produced the most significant methodological proposal of Celso Furtado for economic theory. When Furtado returned to Cambridge in the 1970s, the young researcher had become a respected economist whose interpretative originality set him apart from post-Keynesian contributions. This originality has possibly only recently been assimilated by the economic literature. Therefore, this work aims to understand how the influences of the Cambridge School authors appear in Furtado's works, observing how the economist absorbed these influences in his writings and, as emphasized, what limitations the author identified in his theoretical analysis of the process of economic development.

2. Economic Development: the theoretical link between Furtado and the Cambridge School

The multidisciplinary and independent nature of Celso Furtado's thinking, which developed throughout the 1950s, brought together influences from various approaches to formulate his original structuralist perspective. Much more like a method than a theory, Furtado's work mediates between the historical inductive and logical deductive methods, producing a powerful tool for the theory of economic development (Bresser-Pereira, 2001, p. 25). This formulation was a result of Furtado's concern about the limitations of neoclassical economic theory, which he had felt since his time at CEPAL but refined through his dialogue with the post-Keynesian theory of the Cambridge School.

It can be observed that Furtado had already absorbed some of the post-Keynesian production in his writings amid the lively debate on economic development during the first half of the 1950s. However, it was in the second half of the decade, while pursuing his projects as a “knight-errant” in Latin America, that Furtado strengthened his ties with Nicholas Kaldor. In 1956, in a letter to Roberto Campos, Furtado already emphasized his admiration for Kaldor's work on the subject of economic development, considering him one of the few capable of formulating a truly general theory:

I am of the opinion that few economists are as advanced today in terms of formulating a general theory of development and have made such skillful use of the lasting contributions of classical, neoclassical, and Keynesian economists (Furtado, 2021c, p. 175).

The meeting of economists took place in Mexico in 1956 when Furtado was participating in the working group of CEPAL to prepare a study on the country. According to his account, Kaldor

⁴ It is worth noting that the present work does not aim to categorize Furtado's structuralist thought as post-Keynesian or make any similar assertion. As pointed out by Fonseca (2000), the CEPAL school of thought cannot be properly considered Keynesian due to its much more eclectic nature (which draws influence from other theoretical approaches besides Keynesian theory). Similarly, despite Furtado's alignment with post-Keynesian theories from the Cambridge School, it would not be reasonable to consider his economic thought as post-Keynesian, even though his development theory aligns more with the post-Keynesian theory of the Cambridge School than with the original ideas proposed by Keynes.

impressed him with his "innovative use of Keynesian categories in addressing development problems" (Furtado, 2014, p.177). When Furtado argued that economic theory needed a true innovation in the field of distribution theory, he received a response that Kaldor was working on this topic, with the article "Alternative Theories of Distribution" (Kaldor, 1955), and he received an invitation to spend an academic year at the University of Cambridge⁵. Later, in a letter to Kaldor, Furtado expressed his interest in deepening his studies on economic theory and fiscal policy, thanking for the invitation and reaffirming the professor's advances in the study of the relationship between fiscal policy and economic development⁶. As he wrote to Kaldor on April 11, 1957, the arguments presented in his application during the selection process were:

In my application, I say that your recent approach to fiscal policy opens up new perspectives for increasing the savings rate in countries with low per capita consumption and extremely unequal income distribution, and that I would like to pursue this line of research in connection with the instruments of economic development policies (Furtado, 2021c, p. 305).

The topic would be revisited in 1958 when, in Cambridge, Furtado wrote another letter to Roberto Campos, expressing the desire to invite Kaldor to study Brazil's fiscal system:

I will talk to Kaldor about the plan for next year. Perhaps it is the case to invite him for a couple of months and have him study the Brazilian fiscal system. I am convinced that Brazil cannot sustain the ambitious development policy of recent years without undergoing a profound reform of the fiscal system. The true disorder of our economy's appearance results from the conflict between an ambitious development policy – undoubtedly reflecting the country's aspirations – and the archaic fiscal apparatus behind which all the groups that loudly proclaim development but are unwilling to contribute their share of effort, only sacrifice (Furtado, 2021c, p. 179-180).

To go to England, Furtado had to take a leave of absence from CEPAL. The funding for his sabbatical year was secured through a grant from the Rockefeller Foundation, which initially questioned the choice of the university, believing that for a Latin American economist concerned with development issues, the United States would offer better study opportunities. However, Furtado's justification highlighted that his goal was to "work in the field of economic dynamics, with special reference to the theory of underdevelopment." For this, Furtado argued that it would be necessary to reconsider the "classical, neoclassical, and Keynesian approaches to the theory of production, income distribution, and international trade," in line with recent research that worked with the construction of dynamic models, especially the Cambridge group (Furtado, 2014, p.177).

Upon arriving in Cambridge, Furtado began attending seminars by Nicholas Kaldor and Piero Sraffa, as well as the course offered by Kaldor. As Furtado emphasized, the course was a critical presentation of economic thought, covering the relevant contributions of economists to the understanding of the development phenomenon, extracting the essence of each author while also pointing out their shortcomings. In some ways, it was a similar path to what the Brazilian economist had been pursuing with his articles that would later be collected in the work *Development and underdevelopment* (Furtado, 1961).

Even with the reduced influence of left-wing Keynesians⁷ at the university, Furtado considered the group to be at its most creative moment. For instance, Joan Robinson had just published her work *Accumulation of Capital* (1956), a work that was both the "greatest effort, since Marx, to delve into the logic of capital accumulation in capitalist economies" (Furtado, 2014, p.182) and the best connection between the Keynesianism of the Cambridge School and economic development (Furtado, 2021c, p.305).

⁵ This invitation arises from Furtado's contact with Kaldor, as well as his role in the formation of CEPAL and his participation in the first meeting of the International Economic Association (IEA) (Boianovsky, 2010).

⁶ Following the contributions of Nicholas Kaldor's work of 1956, *An Expenditure Tax*.

⁷ For more about the concepts of left-wing and right-wing Keynesians, see Sylos Labini (1949).

On the other hand, it was in one of the seminars organized by Sraffa that Kaldor presented his paper on economic growth models (Kaldor, 1957), a paper that would have a significant impact on the economic debate. In "A Model of Economic Growth," Kaldor understood the nature of non-economic variables in the growth process, trying to understand why some economies grew faster than others. As Kaldor presented, his growth model was based on a Keynesian approach, incorporating the dynamic model proposed by Harrod (1939)⁸. According to Furtado's account, the new model included a "technological progress function that related the growth rate of capital per worker to the growth rate of labor productivity" (Furtado, 2014, p.183). Through Kaldor's model, it was possible to introduce income distribution into its dynamics as an exogenous element, which was a significant effort to enhance macroeconomic models.

Kaldor defined his growth model based on a few assumptions. The first one was that the economy should operate at full employment. In the model, it was assumed that a growing economy had its level of output limited by the availability of resources, not by effective demand. In strictly Keynesian terms, his model operated in an environment where, in the short term, the supply of goods and services would be inelastic and would not respond to increases in monetary demand. He emphasized that Keynes's theoretical framework applied not only to analyses under conditions of full employment but also when the economy was below full employment. In his classic *The General Theory of Employment, Interest, and Money* Keynes ([1936] 1964) pointed out that full employment was a specific case, and his theory (which seeks to explain the economy when it is out of equilibrium in full employment) remained valid for analyzing situations of full employment.

Regarding this issue, despite the assumption in his model, Kaldor made an important distinction between developed and underdeveloped economies. In a developed economy, the capital stock was equal to or greater than the amount necessary to employ all available labor, making it realistic to think that it would operate at full employment during periods of strong economic growth, leading to capital accumulation and an increase in national income. At the same time, Kaldor argued that underdeveloped economies operated below full employment but not in a Keynesian underemployment condition (meaning, underemployment where there was an inelastic supply of goods and services in the short term, which was not responsive to increases in monetary demand). Thus, Kaldor concluded: "[...] it certainly appears more correct to assume that output at any one time is limited by the scarcity of resources rather than by effective demand" (Kaldor, 1957, p.595).

A second assumption by the author was not to distinguish between technical changes and productivity changes. Kaldor's growth model did not differentiate between technical changes resulting from changes in the capital-labor ratio (in terms of an increase in capital relative to labor) and innovations. For Kaldor, using more capital per worker required some "inventiveness", although not necessarily linked to the introduction of new ideas. At the same time, he argued that technical innovations capable of increasing labor productivity required more capital per worker.

In summary, Kaldor's paper proposed an economic growth model, explaining that, despite its assumptions, it fell within a Keynesian analytical framework. It included the idea of innovations, whether through the introduction of new technologies or any new capital-labor combination. Additionally, it allowed for differentiations between growth in developed and underdeveloped economies. Furtado received the paper with significant enthusiasm, highlighting how the author had a clear understanding of the limitations of the abstract constructs offered by economists in general. With this paper, Kaldor managed to bring originality to the dynamization of the Keynesian model by introducing elements of an institutional theory of distribution. The influence of the theoretical contributions of the Cambridge School on Furtado's thinking would not immediately appear in his work (the essay written for the chair competition at the Universidade do Brasil in 1958 established a direct dialogue with Kaldor, but it would only become known in 1961). Devoted to writing "Economic Formation of Brazil" and taking on the challenge of establishing the Superintendency for the Development of the Northeast (SUDENE, as known in Brazil) shortly after returning to Brazil,

⁸ For more about the dynamic Keynesian approach, see Harrod (1939).

Furtado's more theoretical reflections emerged with the publication of *Development and underdevelopment* in 1961.

In this work, the author highlighted the importance of the model developed by Keynes while also acknowledging its limitations in understanding macroeconomic dynamics in the context of economic development. Furtado was an "atypical" Keynesian, as noted by Bielschowsky (1995, p.60), for characterizing underdeveloped economies in terms of insufficient savings rather than insufficient demand, as in developed economies. This point underscores an important aspect of this study: although it aims to show the theoretical interactions between Furtado's thinking and the Cambridge School, the work developed here does not seek to categorize Furtado's thought as Keynesian, precisely because it recognizes the degree of specificity that Furtado's Latin American structuralist framework has in relation to Keynes and his theoretical successors in Cambridge.

Contrasting the limitations of what Furtado called "classical economics" (associated with neoclassical thinking), the author emphasized: "The tool of macroeconomic analysis [from the Keynesian school] opened up (...) entirely new perspectives and powerfully contributed to breaking through the thick layer of prejudices that had accumulated in the shadow of an increasingly sterile methodological rigor" (Furtado, 1961, p. 12).

As Furtado highlights in this same work, economists of the "classical economics," followers of the "equilibrium tradition," would have difficulty understanding the unpredictable results addressed by Keynesian theory and its non-ergodic perspective, dealing with deviations from the economy's path to full employment. However, while Furtado acknowledges the macroeconomic advancement of the model developed by Keynes, he also emphasizes its limitations in the study of macroeconomics - limitations that, as will be seen later, would be particularly relevant when developing a theory of economic development. Still in the introduction of *Development and underdevelopment*, Furtado (1961, p.12)⁹ points out: "However, the elegance of the Keynesian model concealed in its aggregates much more suggestive problems that were just beginning to be glimpsed through the macroeconomic approach." Not coincidentally, later in the work, Furtado highlights the contributions of Harrod, Domar, Kaldor, and Robinson to explore some of the problems concealed by the macroeconomic aggregates of the Keynesian model.

In *Development and underdevelopment*, Furtado (1961) argues for the need to make alterations to the Keynesian model in a way that can develop an economic model capable of encompassing the process of economic development. Such a change would involve a "dynamization" of the Keynesian model, with this work of "dynamization" having been initiated by Harrod (1939). The dynamization of the Keynesian model made sense in the context after the Great Depression. Given the entire issue of the overproduction crisis that erupted with the 1929 crisis, with the mismatch between supply and demand at an aggregate level, there was a reflection on whether it was possible to achieve continuous and steady growth or if the economy was inherently subject to cyclical variations, with its susceptibility to acute crises such as the one in 1929. In this sense, there was a reformulation of the fundamental question contained in Keynes' General Theory ([1936] 1964), which Harrod places in a dynamic context. Keynes ([1936] 1964), with all his considerations about uncertainty and expectations, establishes a relationship between investment and demand (output), analyzing them at a certain level.

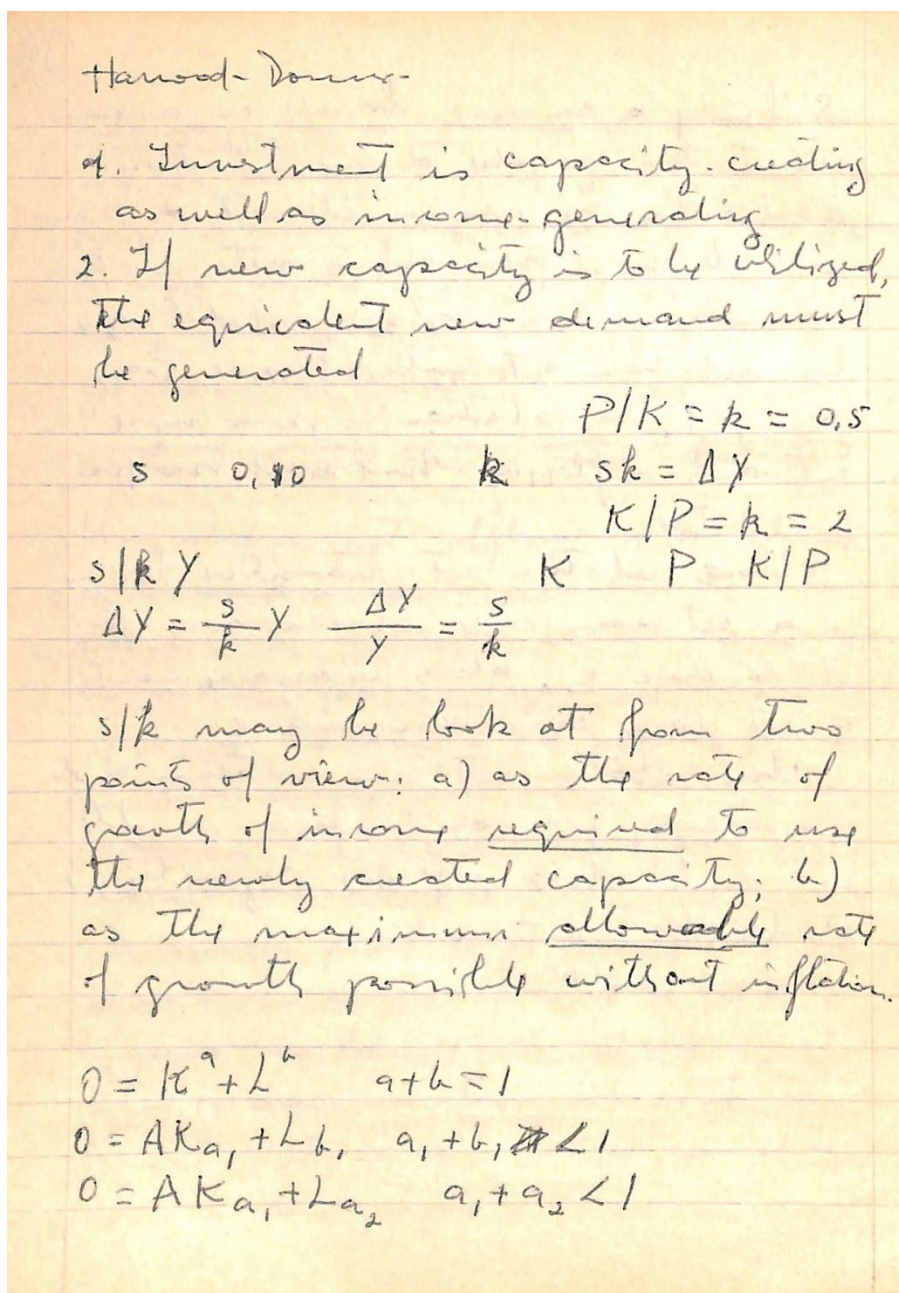
Harrod (1939), on the other hand, reformulates this question, analyzing the relationship between the growth rate of capital and the growth rate of output. This type of relationship is a distinctive and fundamental characteristic for the development of economic growth models. Authors like Harrod (1939) and Kaldor (1957) do this from the Keynesian perspective, while Solow (1957)

⁹ According to Heller and D'Arbo (2012), Furtado is said to have made little progress in fulfilling the proposal to overcome the conventional version of growth in his text *A teoria do desenvolvimento na ciência econômica* (The development theory in economic science) the title of the last section of the sixth and final chapter of the book *A economia brasileira: contribuição à análise de seu desenvolvimento* (The Brazilian economy: a contribution to the analysis of its development) which was published in 1954 and republished as chapter 1 of *Desenvolvimento e subdesenvolvimento* (Development and underdevelopment).

does it from the neoclassical perspective, always analyzing the growth rates of these factors – and of course, incorporating others, such as the population growth rate, for example (Hagemann, 2009; Boianovsky, 2021).

Here, it is worth noting how dynamic Keynesian models seemed to remain relevant in Furtado's theorizations over the years. In one of the manuscripts from his notebooks during the period he resided in Paris while teaching at the Sorbonne University – Furtado assumes the chair of Economic Development in 1965 and remains for twenty years (D'Aguiar, 2013) –, you can find notes about the Harrod-Domar¹⁰ model – a model that associates the theoretical contributions made from dynamic Keynesian models independently developed by Roy Harrod (in England) and Evsey Domar (in the USA).

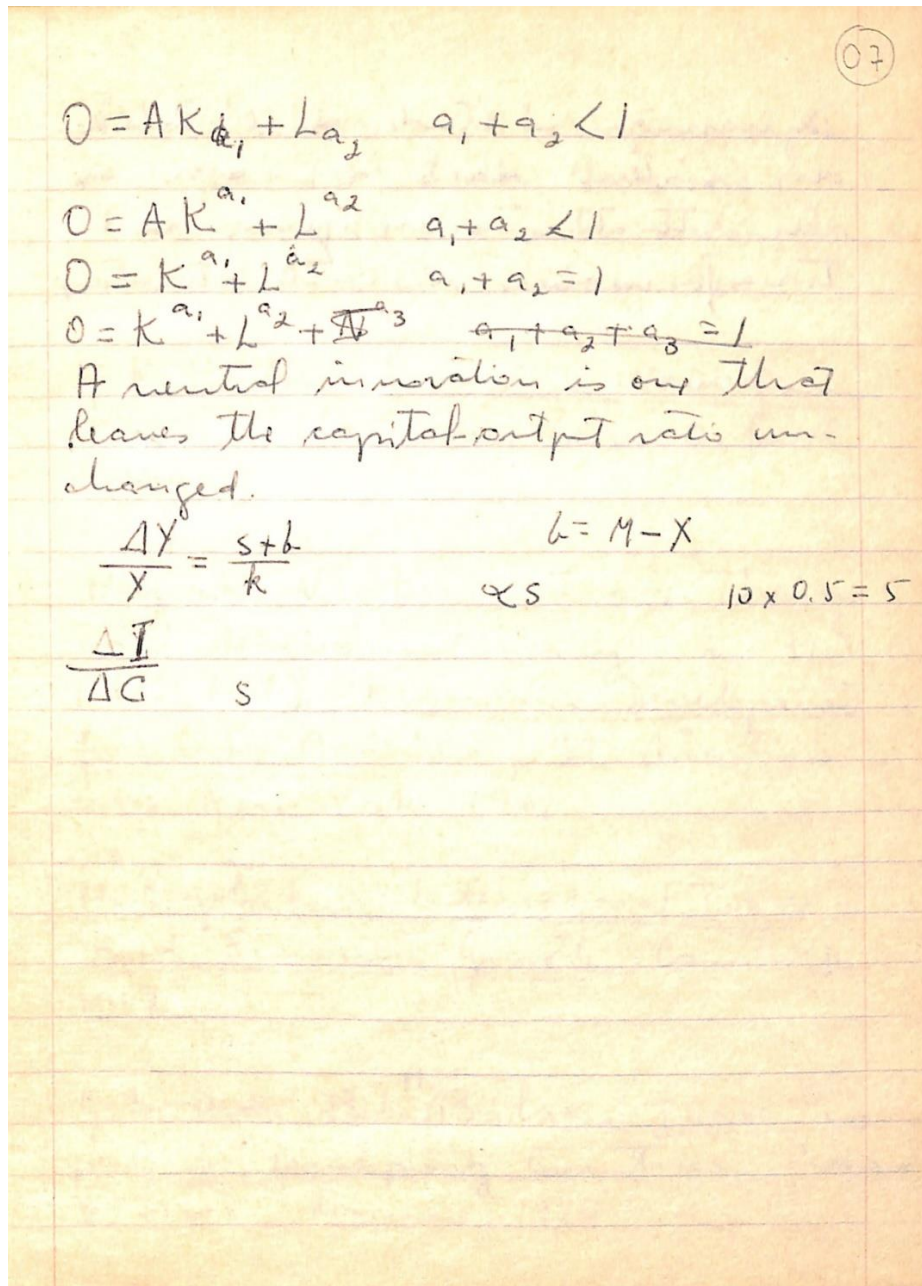
Figure 1 – Furtado's Personal Notes about Harrod-Domar Model (Part 1)



Fonte: Furtado (n.d.a).

¹⁰ For more about the Harrod-Domar model, see Hagemann (2009). For more about the Domar's Keynesian model see Domar (1946, 1947) and Boianovsky (2021).

Figure 2 – Furtado's Personal Notes about Harrod-Domar Model (Part 2)



Fonte: Furtado (n.d.a).

Keynes's model did not consider factors such as population levels, consumption habits, market structure and capital stock, along with their evolution over time. The model parameterizes these variables. Continuing to discuss adaptations to the Keynesian model in order to understand economic development in both developed and underdeveloped regions, Furtado (1961) highlights, for example, that Alvin Hansen uses Keynes's analytical framework, but seeks to understand whether the problem of economic crises is strictly an issue of effective demand or a combination of this with structural economic problems. In his work, Furtado (1961) does not concern himself with discussing the validity of Hansen's theory, acknowledging its limitations. His main point is to emphasize the "typical nature of a special development theory" (Furtado, 1961, p. 84).

In the opening chapter of *Development and underdevelopment*, Furtado (1961) shows concern for the dynamic nature of the economy, where factors such as population growth and technological progress over time are of great relevance in understanding the process of economic development.

This dynamic nature was something absent from the economic model proposed by Keynes ([1936] 1964) in the *General Theory*. In this work, Furtado (1961) also highlights the concept of economic "maturity", which according to him was formulated by Hansen and other authors, such as Kaldor (1966), who also attaches importance to the concept of economic "maturity" in his theory of economic growth, as mentioned earlier.

In chapter 4, *Elements of a Theory of Underdevelopment*, Furtado referred to some theoretical contributions of Joan Robinson. When discussing the stages of industrial economies, Furtado mentioned Robinson's work *The Accumulation of Capital* pointing out that it provided a comprehensive analysis of the relationships between technological choices and the degree of mechanization of the economy. According to Furtado, Robinson's significant contribution was her progressive departure from general equilibrium within what he defined as "modern economic analysis", as well as her analysis of technological development, the dynamics of mechanization, and income distribution (Furtado, 1961, p.176). In the same chapter of *Development and underdevelopment*, Furtado (1961) highlighted Robinson's theoretical advances concerning capital profitability, in line with the side she defended in the Cambridge capital theory controversy or "Cambridge Controversy."

The Cambridge Controversy involved a debate between authors associated with Cambridge (Massachusetts) and Cambridge (England), taking place from the mid-1950s to the 1970s¹¹. On the American side, economists advocating the neoclassical approach were among the key figures, including Robert Solow and Paul Samuelson, both at the Massachusetts Institute of Technology (MIT), as well as Frank Hahn and Christopher Bliss (the latter two having links to the University of Cambridge but supporting the same side of the debate as the authors associated with MIT). On the English side, prominent authors included Joan Robinson, Piero Sraffa, Luigi Pasinetti, and Pierangelo Garegnani. In a simplified manner, the debate revolved around criticisms of neoclassical properties of the production function. One of these criticisms was Joan Robinson's objection to the diminishing marginal returns of capital (Cohen and Harcourt, 2003; Harcourt, 1976, 1969; Gontijo 2022).

Furtado (1961), in chapter 4 (*Elements of a Theory of Underdevelopment*) of the book *Development and underdevelopment*, precisely addressed this point of criticism presented by Robinson in the Cambridge Controversy. Furtado highlighted how technological progress, which initially found more favorable economic conditions in capital goods industries than in consumer goods industries, increased the capital-labor ratio. Initially, this ratio would increase in the capital goods industry, but eventually it would also spill over to the consumer goods sector (due to the fall in capital goods prices relative to consumer goods), with significant systemic consequences for the economy. When explaining this dynamic of the increase in the capital-labor ratio in the economy, Furtado emphasized that this higher degree of mechanization did not necessarily lead to a reduction in returns on new capital investments.

In other words, Furtado pointed out that in this economic process the investment in capital by firms did not necessarily exhibit diminishing marginal returns. Addressing this point, Furtado highlighted Robinson's work (1956). Still in chapter 4, Furtado (1961) continued to critically assess the type of development theory produced in major western academic centers, including authors like Kaldor, Harrod, and Domar. According to Furtado, the development theory developed in these major centers limited the inclusion of "non-economic" factors. In Furtado's view, this represented a fundamental flaw because it ignored the fact that economic development is a process with an important historical dimension.

In Furtado's view, recognizing the specificity of the underdevelopment phenomenon and incorporating it into theoretical formulations regarding economic development was crucial. He argued that the use of highly abstract models could not provide an adequate analysis of the economic development process. Abstract models with a strong hypothetical-deductive character would not allow the incorporation of historical time – the passage of time with its accompanying changes in economic and social conditions. Another difficulty these abstract models had, according to the author,

¹¹ For more about Cambridge Controversy, see Cohen e Harcourt (2003), Harcourt, (1976, 1969) and Gontijo (2022).

was the inclusion of different economies in different stages of economic development coexisting within the economic dynamics (Bianconi and Coutinho, 2019).

As pointed out by Rugitsky (2016), one of the contributions of the Latin American economic literature, in which Furtado is included, is precisely the possibility of developing economic theory by incorporating features of heterogeneity. In an interesting passage from his work presenting the possible interaction between Latin American economic literature (with its emphasis on the issue of sectoral heterogeneity) and Kaleckian theoretical models, Rugitsky (2016, p.12) highlights: "Models are, of course, abstractions. Their usefulness should be judged by their ability to illuminate particular historical developments, and different models might be more adequate, thus, to interpret different historical periods or different economies."

Typical of Furtado's structuralist method, he pointed out that an abstract economic model derived from a historical experience could not have the objective of achieving a high level of generalization. This was because an economic theory – with its respective model – should explain not only the different levels of economic development achieved by various coexisting economies in a given historical period but also changes of a qualitative nature in the economy. Furtado (1961, p. 164) gives the example of the Industrial Revolution, a major rupture in the world economy that constitutes an autonomous and defining phenomenon of the economic development process since its occurrence. By emphasizing the need to develop economic analysis in which the historical dimension and institutional aspects assume greater prominence, Furtado gradually distanced himself from the post-Keynesian contributions to formulate his own economic model.

3. Economic underdevelopment: the difference between Furtado and Cambridge

Beyond understanding the commonalities between the post-Keynesian theory of Cambridge and Furtado's structuralist thinking, perhaps more importantly is understanding how these approaches differ. These differences may precisely reveal a characteristic of the structuralist method, with its CEPAL origins: the need to adapt the economic theory to the context of underdevelopment. Nevertheless, in Furtado's thinking, a kind of "Kaldorian dive" seems to have been significant in the evolution of his development theory. Both the "dive" and the limitations of economic development theories developed in the center (and their growth models) would be important for the analysis of underdeveloped economies proposed by Furtado.

The publication of *Teoria e Política do Desenvolvimento Econômico (Theory and Policy of the Economic Development)* whose first edition was made available to the public in 1967, served the audience of his lectures at the Sorbonne School of Economics. The book was a revised and expanded version of *Desenvolvimento e subdesenvolvimento (Development and underdevelopment)* in which Furtado sought to confront abstract generalizations through a structural and historical approach, emphasizing the study of delayed industrializations and asymmetric international relations (Furtado, 2014, p. 489). As he emphasized in his preface to the French edition of 1970, distancing himself from the perspectives of development theory, from Marx to Hicks, which understood "the explanation of economic processes in the most advanced countries in industrialization (...) sufficient for the understanding of what happens in the economies of underdeveloped countries" (1977 [1967], p. 14).

Regarding the origin of his work *Theory and Policy of the Economic Development*, Furtado highlights in one of his notebooks from the period when he was teaching at Sorbonne (Furtado, n.d.) that it was a tradition in France for professors to write a book so that students taking a particular course could follow it. It was this tradition that led Furtado (n.d.) to "rework" the book *Desenvolvimento e subdesenvolvimento (Development and underdevelopment)* culminating in the work *Teoria e Política do Desenvolvimento Econômico (Theory and Policy of the Economic Development)*. In Furtado's own handwritten words (Furtado, n.d., p. 161) regarding the origin of the new book and its main focus:

It is a tradition in France for professors to write works that serve to guide students studying a specific subject. Publishers themselves are responsible for keeping this tradition alive with attractive proposals, even suggesting the title of the new work to make it interesting for students in a group of subjects. I had already published in French the text *Des. E Sub.*¹². I was then invited to revise it, which gave rise to my *Teoria e Política do Des. Econômico*¹³, a text that captures the essence of my structural approach to the genesis of underdevelopment and external dependency in the process of technological progress diffusion and the formation of a global economic system. The approach is simultaneously structural and historical, integrating within a single analytical framework the study of delayed industrialization and asymmetric international relations.

The fact that Furtado had connections with the theorists of the Cambridge School only in part of his theory and was not a post-Keynesian author reinforces the need to adapt theoretical contributions developed in central countries to understand peripheral economies. Furtado ([1967] 1977) conceives that historical time is a fundamental factor in understanding economic functioning. As highlighted by Saes and Soares (2021), Coutinho (2021), and Bresser-Pereira (2007), the historical aspect is essential in Furtado's developed method. The structuralist approach developed by Furtado is marked by the development of a historical-structural method, as Saes and Soares (2021) put it, or a historical-inductive method¹⁴, as Bresser-Pereira (2007) describes it.

By pursuing the historical method, Furtado opposed the hypothetical-deductive method, which in the field of economic science, corresponds to the dominant method in the neoclassical theoretical framework. This method is fundamentally aprioristic. Seeking an analysis from a mathematical model that can describe the economic relationships of agents, the hypothetical-deductive method establishes simplifying hypotheses *a priori*, allowing the construction and operationalization of this mathematical model. Agents operating to maximize their utility (i.e., rational agents), perfect information, and decreasing returns to scale are fundamental assumptions for theoretical construction using the hypothetical-deductive method (Bresser-Pereira, 2009).

This method of analysis has an ahistorical character. In an attempt to align with the natural sciences – especially physics – comprising a set of equations that describe static equilibriums, this method lacks a concept of path dependence. Unforeseen irregularities, results of historical processes, are not considered in this method of analysis. This perspective has developed and solidified since the so-called marginalist revolution, which deepened the utilitarian principles founded by Jeremy Bentham – and later further developed by John Stuart Mill – in England, bringing economic science closer to the natural sciences. From the marginalist revolution, led by Stanley Jevons (in England), Léon Walras (in France), and Carl Menger (in Austria), to recent theoretical developments based on the neoclassical theoretical framework, the hypothetical-deductive method has established itself strongly and deepened in economic science, following an axiomatic and ahistorical perspective (Bresser-Pereira, 2009; Screpanti and Zamagni, 2005; Roncaglia, 2017).

On the other hand, the historical-deductive method presents a different perspective. When applied in economic science, the historical-deductive method moves away from the idea of the hypothetical-deductive method, attempting to align economic science with the natural sciences. Instead of adopting a set of hypothetical assumptions aimed at the mathematical operationalization of economic relationships through static equilibriums, the historical-deductive method includes aspects of historical experience to arrive at the bases of its theoretical formulations. Economic science supported by the historical-deductive method encompasses economic and social reality. The historical-deductive method uses both historical regularities and irregularities in the course of history to propose the principles of its theory (Bresser-Pereira, 2009). As Bresser-Pereira (2009, p. 504) points out regarding historical events: "There are no 'regularities' in the 'big bang' or in the Industrial Revolution."

¹² *Desenvolvimento e subdesenvolvimento* (Furtado, 1961).

¹³ *Teoria e Política do Desenvolvimento Econômico* (Furtado, 1967).

¹⁴ For more about this methodological issue, see Bresser-Pereira (2009, 2017).

The historical-deductive and hypothetical-deductive methods have different criteria of truth, meaning different objectives to be achieved through the analysis conducted using each method. The hypothetical-deductive method focuses on the internal logical consistency of its models, while the historical-deductive method focuses on conformity with reality. It is worth noting that the historical-deductive method also develops theoretical models but proposes historical models instead of the axiomatic models of the hypothetical-deductive method (Bresser-Pereira, 2018).

In this sense, both the structuralist school in which Furtado was involved and the post-Keynesian formulations of authors like Kaldor and Robinson would be marked by the adoption of a historical-deductive method. From J.M. Keynes, with the theoretical developments of his classic work *The General Theory of Employment, Interest, and Money* (Keynes, [1936] 1964), through Roy Harrod and reaching Nicholas Kaldor, the method of analysis used by authors in the Keynesian tradition is of a historical-deductive nature (Bresser-Pereira, 2018). Thus, it makes sense to think why there is such a fluid possibility of theoretical dialogue between Furtado's contributions and those of the post-Keynesian authors of the Cambridge school. After all, a hypothetical-deductive method, strongly axiomatic in nature (aimed at the internal logical consistency of its model rather than conformity with the reality observed in historical experience), would hardly fit with Celso Furtado's proposed theoretical analysis at any point in his extensive academic career.

Furtado's analytical method, with its emphasis on the historical process, is one of the main features that give his work a heterodox character, proposing a theory that is not compatible with the typical static nature of economic theories strongly based on the neoclassical framework. In his book *Theory and Policy of the Economic Development*, Furtado ([1967] 1977) points to the need for a dynamization of the economic model developed by Keynes. According to Furtado, the initial formulation of the Keynesian model points to a static model, a timeless equilibrium where time is considered a constant variable (Fonseca, 2021).

It is worth noting that: discussing the static nature of Keynes's model and a timeless equilibrium is distinct from saying that the factor of time is completely disregarded. In the *General Theory* (Keynes, [1936] 1964), there is a question of uncertainty in economic dynamics, a crucial factor in characterizing money as non-neutral in the Keynesian model. In this context, Keynes's theory introduces a concept called non-ergodic reality, as defined by Davidson (1982, 1991, 1996). In an ergodic economic environment, as defined by Davidson, "The future is merely the statistical reflection of the past, and economic actions are in some sense timeless" (Davidson, 1991, p. 132).

In other words, in an ergodic economic environment, expected values of economic variables can be calculated probabilistically based on observations from past periods, detached from the concept of historical time. In the theory proposed by Keynes ([1936] 1964), the issue of historical time is considered. However, in Keynes, this issue is considered to understand fluctuations in the level of economic activity that affect full employment levels. For Furtado ([1967] 1977), historical time should be considered as something that influences structural aspects of the economy, reflected in variables that, not being central to the problem pursued by Keynes, are considered constant in the Keynesian model.

In chapter 6 of *Theory and Policy*, Furtado ([1967] 1977) presents the models of Harrod and Kaldor as attempts to "dynamize" Keynes's model. Called the *Second Projection of Keynesian Analysis: Dynamic Models*, this chapter is new compared to the 1961 text, advancing the discussion on "economic maturity." Furtado emphasizes the attempt to "dynamize Keynes's model by disaggregating some variables and delving into the study of some agents responsible for strategic decisions" (Furtado, [1967] 1977, p. 80).

Furtado ([1967] 1977) points out that Keynes's theory focuses on the pursuit of full employment in economic activity. In this pursuit of maintaining full employment levels, Keynes does not focus on changes in a range of variables crucial to understanding economic development, such as population levels, consumption habits, market structure, and capital stock. He parametrizes them. In his study of the systemic condition in which the economy deviates from full employment levels, Keynes highlights the level of investment.

As presented in the *General Theory* (Keynes, [1936] 1964), it is through increases in investment levels that the desirable level of economic activity (full employment level) can be achieved. In the case of problems with economic activity falling below this level, recovery would come through increased investment, with the state using fiscal and monetary policy to achieve this. However, while the classic Keynesian model aimed to provide an instrumental theory capable of making corrections for short-term economic fluctuations, seeking to maintain full employment, Furtado's goal ([1967] 1977) was to propose a theory of economic development within economic science.

As noted in chapter 5 of *Theory and Policy* (Furtado, [1967] 1977), in industrialized (developed) countries, the problem of economic cycles – that is, stabilizing economic activity at a high level, close to full employment – was the problem of development for these countries. Since industrialized countries are on the frontier of economic development, it was natural that in terms of economic policy, in a view like that of Keynes ([1936] 1964), the focus was on implementing countercyclical actions to stabilize the trajectory of economic growth. However, to understand the process of economic development in underdeveloped countries, it makes sense to dynamize the Keynesian model, as emphasized by Furtado ([1967] 1977).

Thinking about the development process of underdeveloped countries, they demanded a catching-up process to reach the status of developed countries. This is where an author who can also be considered one of the pioneers in the study of economic development comes into play: Michal Kalecki. Developing his theory of employment almost simultaneously with Keynes (with both authors independently developing their theories, where Kalecki wrote a few years before Keynes), Kalecki also relies on the principle of effective demand. However, Kalecki advances in the discussion of the economic development process. At this point, he addresses a fundamental aspect of studying this process, not covered by Keynes in his theory, which focused on stabilizing the economy (especially in developed countries): the specific economic problems of underdeveloped countries. Not coincidentally, both Kalecki and Furtado can be considered pioneering authors in the field of economic development (Davidson, 2000; López, Puchet, and Assous, 2009).

As Kalecki (1966 [1983]) pointed out, there were crucial differences in the economic problems faced by developed and underdeveloped economies (López, Puchet, and Assous, 2009). In the case of developed countries, in the trajectory of economic growth, the main problem that governments had to deal with was the business cycles. For this movement, governments should act with policies aimed at sustaining the level of effective demand, keeping it at full employment. In the case of underdeveloped countries, governments had to deal with two movements: (i) increasing productive capacity (raising the level of output to that of developed economies) and (ii) dealing, like developed countries, with cyclical economic fluctuations (aiming to maintain effective demand at full employment) (Manna, 2020; Kalecki, 1966 [1983]).

In these two different economic contexts, governments should have economic policies aimed at increasing investment. As Kalecki ([1966] 1983) emphasizes, there could be underemployment in underdeveloped countries. However, the goal of increasing investment in these economies should not only be to overcome the problem of effective demand due to underemployment but also to accelerate the expansion of productive capacity. This differentiation made by Kalecki is similar to Furtado's perspective on the need to dynamize the Keynesian model to formulate a theory that explains the process of economic development. Since underdeveloped economies had to deal with other problems beyond demand issues solely due to economic cycles, there was a need to "dynamize" the Keynesian model. For the formulation of a theory that could encompass movement (i) that underdeveloped countries have to deal with in the course of economic development, issues such as population growth, capital accumulation, and technological progress are fundamental.

In the quest to develop a theory of economic development, Furtado does not turn to Kalecki's contributions (despite the possible parallel that can be drawn between Furtado and Kalecki), but rather to the theoretical framework of Keynesian heirs, that of the Cambridge School, with Kaldor's contributions. As pointed out by Fonseca (2021), in his *Theory and Policy*, Furtado ([1967] 1977) begins his analysis in chapter 6 by addressing the equilibrium conditions of the Keynesian model in

the short term, with a given capital stock. Later, Furtado begins to include the perspective of increasing the economy's productive capacity. It is in this idea of understanding the growth trajectory of productive capacity over time that he turns to the "dynamized" Keynesian models of Harrod and Kaldor. For example, Furtado ([1967] 1977) refers to important theoretical concepts contained in Kaldor's model, such as technological progress, in his quest to establish a theoretical model capable of explaining the process of economic development.

Here, it is interesting to note revisions made by Furtado in the work *Theory and Policy of Economic Development*. Some differences are striking between the original version, from 1967, the fourth edition, from 1971 (before Furtado's second period at the University of Cambridge), and the sixth edition from 1977 (ten years after the first version of the book and a few years after the end of his second period in Cambridge). The chapter 6, *Segunda projeção da análise keynesiana: os modelos dinâmicos* (*Second projection of the Keynesian Analysis: the dynamic models*) gains new elements in the fourth edition (Furtado, [1967] 1971) in relation to the original version (1967). The sixth version (Furtado, [1967] 1977) is marked again by the incorporation of new passages in Furtado's theoretical contribution regarding the dynamization of the Keynesian model.

Firstly, regarding the difference between the 1971 edition and the 1967 edition, the most important point is the inclusion of the methodological appendix analyzed by Fonseca (2021). As well highlighted in the early pages of the fourth edition (Furtado, [1967] 1971), this is an "entirely revised and expanded version" of the book. Indeed, in relation to its original version, this chapter is expanded and revised. The inclusion of the methodological appendix is already an important extension of the chapter. Furthermore, there is a significant change in what Furtado, in the fourth version, separates as the section *A função de progresso técnico de Kaldor* – whereas in the original chapter 6, there is no division into sections (Boianovsky, 2010). Furtado ([1967] 1971) seems to aim to better incorporate the dynamic aspect of Kaldor's model into his work. When discussing the relationship between income per worker (Y/L) and capital per worker (K/L) in the original version, Furtado (1967) works only with the ratios between these factors, with these ratios on the vertical and horizontal axes, respectively, of the graph presented at the end of the chapter (Furtado, 1967).

On the other hand, in discussing this in the fourth edition of the work, Furtado ([1967] 1971) starts working with derivatives, presenting a distinct graph. He works with the derivatives of K/L and Y/L when addressing the Kaldorian progress function, meaning he starts to deal with the variation of capital per worker and income per worker ratios over time. This change seems to precisely demonstrate Furtado's attempt to include the element of time in his discussion of the theory of economic development. This change seems to precisely demonstrate the importance Furtado placed on the dynamization of the Keynesian model carried out by Harrod and Kaldor. Not by chance, Furtado ([1967] 1971) refers to the articles *A Model of Economic Growth* and *A New Model of Economic Growth*, of Kaldor (1957) and Kaldor and Mirrlees (1962), respectively.

As highlighted, Kaldor's article (1957) coincides with the period of Furtado's first time in Cambridge. Since the fourth edition of Furtado ([1967] 1971) predates his second visit to Cambridge and his interaction with Kaldor at King's College (Furtado, 2021c), this change in his work in the early 1970s seems to be an influence from his initial encounter with Cambridge's post-Keynesian theory in 1957-1958. Apparently, since his first visit to Cambridge, the issue of dynamizing the Keynesian model as a theoretical basis for understanding the economic development process was already relevant and gained more attention as he sought to delve deeper into this issue even before his second contact with Kaldor at the University of Cambridge.

In addition to this kind of "Kaldorian dive" that Furtado seems to undertake in his reflections on economic development theories, in the fourth edition of *Theory and Policy*, Furtado ([1967] 1971) brings up a rare and interesting methodological discussion. As pointed out by Fonseca (2021) and Domingues and Fonseca (2021), despite the undeniable theoretical contribution of the structuralist theory originated at CEPAL, it is rare to find a specific methodological discussion by its main authors. In the fourth version of *Teoria e Política* Furtado ([1967] 1971) dedicates an annex to methodology, discussing methodological aspects of structuralism within the theory of economic development.

Entitled *Estruturas e Modelos na Análise Econômica (Structures and Models in the Economic Analysis)*, the methodological annex precisely discusses the relationship between structuralist theory and the economic models used by other schools of economic thought. In this part of his work, Furtado ([1967] 1971) emphasizes the ahistorical nature of macroeconomic models based on an axiomatic mathematical perspective that leaves out various aspects of agent interactions. At one point, Furtado ([1967] 1971) criticizes macroeconomic models that are microfundamented on a Walrasian general equilibrium model. In this passage, a criticism of methodological individualism, typical of the legacy of marginalist revolution in economic theory, is exposed.

In the perspective of the Walrasian general equilibrium, the properties of the economic system correspond to the properties of its agents. In other words, from the perspective of methodological individualism, the economic system is merely "a set of various agents," just a sum of agents with homogeneous preferences (Screpanti and Zamagni, 2005). According to Furtado ([1967] 1971), economists should not work with macroeconomic models based on the Walrasian general equilibrium model, as they would, in essence, be "microeconomic" – since they are based on the decision-making data of individual agents.

Furtado ([1967] 1971, p. 75) acknowledges the need for certain simplifications by economists when constructing their macroeconomic models based on available data: "Given the multiplicity of decision-making agents, such simplification techniques have proven to be indispensable if one intends to 'reduce' such decisions to intelligible processes". However, delving deeper into his methodological discussion about structuralism, he emphasizes:

It is from this raw material of an imprecise nature that the economist constructs 'macroeconomic' models. However, this construction would not be possible if the economist did not already have a global idea of economic reality. And since this global idea refers to a historical reality, the macroeconomic model must also be referred to this historical reality (Furtado, [1967] 1971, p. 75-76).

This passage precisely aligns with an important methodological aspect that Furtado ([1967] 1971) presents regarding the structuralist school of thought that emerged in Latin America in the early 1950s. According to him, the structuralist school aimed to demonstrate the importance of "non-economic parameters" within macroeconomic models. Economic variables would depend on these "non-economic parameters," and these parameters could change significantly during periods of rapid social change or when extending the time horizon of economic analysis. For this reason, Furtado ([1967] 1971) points out that these non-economic aspects should be studied in detail, especially in the economic analysis of underdeveloped countries. Because they have economically, socially, and technologically heterogeneous economic systems, the consideration of these "non-economic parameters" is of special importance in the economic study of these countries. This emphasis on the relevance of "non-economic parameters" shows the increasing interdisciplinary nature of the method developed by Furtado throughout his career (Saes and Soares, 2021).

At the end of his methodological annex in the fourth edition of *Theory and Policy*, Furtado ([1967] 1971) presents his view of microeconomics and macroeconomics, summarizing the methodological discussion in the annex regarding structuralism¹⁵. According to Furtado ([1967] 1971, p. 76), microeconomics is essentially "a simple set of rules of formal rationality" and macroeconomics is "an effort of capture, *a posteriori*, and translate into economic language, a historical process in which 'the economic' and 'the non-economic' condition each other (...)" (Furtado, [1967] 1971, p. 76). It is precisely this macroeconomic perspective that summarizes the idea of the structuralist method that Furtado presents in this work. At the end of his methodological annex, Furtado ([1967] 1971) points out that it is precisely this dual approach that economic science should encompass, making it difficult to construct a theoretical framework. Economic science should encompass both the analysis of the behavior of economic agents in precisely defined environments –

¹⁵ As Fonseca (2021) and Domingues and Fonseca (2021) emphasize, this is one of the few expositions on the structuralist theory method.

based on the axiomatic perspective typical of the microeconomics influenced by marginalism – and the analysis of historical processes and social realities, with their respective typologies.

If this contact with post-Keynesian theory appears in *Theory and Policy* in the early 1970s – before Furtado's second visit to Cambridge – it appears even more after Furtado's second period in Cambridge, in the sixth edition of the work (Furtado, [1967] 1977). Furtado seems to delve even deeper into his "Kaldorian dive." In the sixth edition of his classic work, Furtado extends the section *A função de produção a coeficientes variáveis* (*The production function with variable coefficients*) contained in chapter 6. In the sixth edition of the book, Furtado devotes more space to discussing the instability of Harrod's growth model, highlighting the issue of the possibility of changes in factors distribution. Furtado ([1967] 1977) emphasizes the instability of Harrod's model (1939, 1948), which assumes a constant capital-output ratio (Y/K).

This constancy in the ratio makes Harrod's model (1939, 1948) unable to address the issue of technological progress. It is because of this limitation that Furtado proceeds in his exposition of economic development theories by revisiting the contributions of Solow and Kaldor. In different ways, both authors contribute by adding dynamism to the parameters in their models. However, while Solow (1957) relies on the neoclassical framework, Kaldor relies on the Keynesian framework (Kaldor, 1957; Kaldor and Mirrlees, 1962; Hagemann, 2009; Boianovsky, 2021). In the theoretical exposition of chapter 6 of *Theory and Policy*, a differentiation is made between these two approaches to dynamizing the theoretical model. It is interesting to note that, in all three versions of the work, Furtado ([1967], 1971, 1977) concludes the chapter in the same way, presenting this difference between "neoclassical" and "Keynesian" dynamization.

From Solow's perspective, his neoclassical approach, strongly influenced by the Walrasian general equilibrium model, assumes an automatism in reaching a dynamic equilibrium position in the economic growth trajectory, provided by market mechanisms and price systems. The "neoclassical" dynamization, according to Furtado (1967), tends to disregard all the effort of Keynesian thought to capture the structural problems that occur in an economy operating in a free market system. From Kaldor's perspective – and the "Keynesian" dynamization – (Kaldor, 1957; Kaldor and Mirrlees, 1962), Furtado (1967) states that the dynamization of the Keynesian model disaggregates variables in a way that deepens the analysis of the behavior of agents responsible for strategic decisions in the economic system. In other words, the "Keynesian" dynamization considers the structural problems of an economic system governed by free market principles in its theoretical conception.

It is interesting to revisit the methodological annex of chapter 6 of *Theory and Policy* (Furtado, [1967] 1971) here. Furtado's concern with the dynamization of the parameters of the Keynesian model is closely linked to the importance he places on the heterogeneity of underdeveloped economies compared to developed economies. The structuralist method adopted by Furtado, with the duality between the center and the periphery, would only be compatible with a theoretical framework that involves dynamizing economic factors (capital, output, and labor) and also considers changes in the economic system, such as technological progress, among other relevant factors.

Raising the issue of how heterogeneities within the context of economic underdevelopment are fundamental characteristics of Furtado's thought, it is worth noting an aspect of the author's thinking present in *Development and underdevelopment* (Furtado, 1961): the issue of sectoral heterogeneity typical of underdeveloped countries, which is a focal point in the work in explaining the economic dynamics of underdevelopment. According to Furtado (1961, p. 195), "It is the technological heterogeneity between sectors or departments of an economy that characterizes underdevelopment". For the author, underdevelopment is a specific phenomenon, triggered as modern capitalist firms engage with archaic economic (and social) structures. Furtado points out that economic underdevelopment can take different forms and be at different stages, highlighting something significant in his thinking: underdevelopment is a specific process and not a necessary stage in the development of economies.

In other words, most developed economies had never required a catching-up project dealing with issues of sectoral heterogeneity, as in the case of countries facing underdevelopment. In this context,

Furtado (1961) points out, for example, the role of foreign companies in underdeveloped economies. When addressing sectoral heterogeneity in underdeveloped economic contexts, Furtado notes the simultaneous existence of a subsistence sector and a modern (industrial) sector. In cases such as what he highlighted as the Brazilian economy at the time he wrote the book, the modern sector is divided into two types: one focused on exports and the other focused on the domestic market, the latter aiming an import substitution process. Furtado also emphasizes that this import substitution process depends on the competitiveness with the external sector supplying the underdeveloped economy with these imports.

Furtado (1961) highlights the need for underdevelopment to have its autonomous theoretical elaboration due to the technological heterogeneity between subsistence and modern sectors. As he points out, according to the economic theory that was dominant at the time he wrote *Development and underdevelopment* – a fundamentally marginalist theory that implicitly establishes linear and homogeneous production functions – the mobility of productive factors and the flexibility of production coefficients would be sufficient conditions to prevent the coexistence of a modern (industrial) sector and a traditional (subsistence) sector in economic dynamics. In other words, these conditions would be sufficient to prevent the sectoral heterogeneity typical of underdeveloped economies, according to the perspective of mainstream economic theory. However, the historical experience goes against this idea, and that is why Furtado (1961) argues for the need for specific theoretical efforts to analyze the economic context of the periphery.

Therefore, Furtado's ideas refined in *Teoria e Política* throughout the 1970s, reflect the ongoing development of the economist's theses. In exile, observing the transformation of the Brazilian economy during the military dictatorship, Furtado is prompted to reevaluate the promises of modernity that underpinned development theory. The dynamization of parameters through the incorporation of non-economic variables in the analysis of development or national modernization policies leads him to his radical interpretation of the "myth of economic development" and to opening his theory to cultural variables, which are central in *Dependência e desenvolvimento* (*Dependency and development*) (Cunha & Brito, 2017; Manzatto & Saes, 2021).

Following the trajectory of works on the topic of economic development, in *O mito do desenvolvimento econômico – The myth of economic development* – (Furtado, 1974), which compiles essays, as Furtado himself describes (1974), written in Washington during his time as a visiting professor at American University in 1972, and written in Cambridge during the academic year 1973-1974, spent at the University of Cambridge. According to Furtado (1974), the last essay in *The myth of economic development*, written in Cambridge, could be considered the theoretical core of the other essays. In fact, the second stay in Cambridge appears to be fruitful in terms of theoretical advancements that would make up the book.

It is during this stay that two draft sections of the book were written, which have been recently published: *Underdevelopment and Dependence: The Fundamental Connections* (Furtado, 2021a) and *The myth of economic development and the Future of the Third World* (Furtado, 2021b). These two essays are an important part of what would constitute the theoretical core of the book *O mito do desenvolvimento econômico – The myth of economic development* – (Furtado, 1974).

The book is one of Furtado's most interesting works on economic development. In this work, Furtado is more dedicated to presenting his own theoretical conceptions regarding the development process. Not coincidentally, in comparison to the works from the 1960s mentioned in this paper, *Theory and Policy of Economic Development* (1967) and *Development and underdevelopment* (1961), his citation of other authors (both from the Cambridge school and others) is substantially less. For instance, Kaldor, who is referenced several times in the previous works, is mentioned only once in the book, for example, and is the only author from the Keynesian tradition of Cambridge to be explicitly mentioned (of course, the book may contain other references not explicitly quoted). In this case, the mention of Kaldor arises in Furtado's (1974) discussion of the role played by large corporations within the economic relations between the center and the periphery.

To conclude this section of the work, it is worth summarizing how the theoretical interaction between Furtado's thinking and post-Keynesian thinking has been presented so far. In summary, by engaging with post-Keynesian contributions but without abandoning his roots in Latin American structuralism, Furtado established a mediation between "non-economic" and "economic" processes. Through his historical perspective, considering the specificities of different economic contexts, both in developed and underdeveloped countries, Furtado offered an original perspective to theories developed in major Western academic centers. An approach that, by giving more room for the dynamization of model parameters (and also for structural heterogeneities), has been increasingly valued in recent years.

4. A Furtadian method? Contemporary approaches and their theoretical interactions with Latin American structuralism

Despite the significance of Celso Furtado's contributions and his theoretical originality in the 1970s, at that time, there was little evidence of the assimilation of his propositions regarding the dynamization of the economic model in the central countries. More recently, however, Furtado's structuralist perspective seems to be experiencing a revival through contemporary economic analyses, as pointed out by Loureiro et al. (2020). Furtado's criticisms of neoclassical theory have been reclaimed by those seeking to understand the dynamics of economic development under a neoliberal paradigm from a Latin American structuralist standpoint. Furtado's concept of economic development may provide an important theoretical basis for promoting alternative economic policies to the neoliberal paradigm. Such policies can connect to heterodox theoretical contributions that can underpin economic policies for Latin America and other underdeveloped countries (Rugitsky, 2016; Brenck and Carvalho, 2020).

Furthermore, there is an openness to interactions between the economic literature of Latin American structuralism and contemporary theoretical models. As Rugitsky (2016) suggests, understanding the observed heterogeneities within an economy and its transformations over time, as well as the disparities between different economies coexisting in the same period, can expand the variety of Kaleckian economic models. Another potential interaction between the structuralist tradition, of which Furtado is one of the main figures, and contemporary economic theoretical approaches is the interaction between structuralism and complexity economics, as highlighted by Cardoso (2021, 2012).

Finally, especially in this work, it is worth emphasizing another theoretical interaction with the Latin American structuralist approach: the interaction between structuralism and post-Keynesian economics. Stockhammer (2023) defines a "post-Keynesian structuralist approach" by incorporating macroeconomic aspects into growth models to enable a proper analysis of peripheral economies. It is important to note that the concept of structuralism used by Stockhammer (2023) is that of Latin American structuralism, or as the author himself highlights, the theoretical tradition in which Furtado and Prebisch stand out as key promoters. When he establishes the concept of structuralism used in his article, Stockhammer (2023) emphasizes that Raúl Prebisch's *The economic development of Latin America and its principal problems* (1950) and Celso Furtado's *Development and stagnation in Latin America: A structuralist approach* (1965) are seminal works¹⁶.

Among these three theoretical interactions mentioned, the interaction between the post-Keynesian and structuralist approach stands out more in this work, as it is not the first time that such a theoretical interaction has been raised. Throughout this paper, one of the main objectives was to show how it is possible to establish a theoretical interaction between the post-Keynesian approach (from the Cambridge School authors) and Furtado's structuralist approach. After various discussions, this interaction is appropriately established. Stockhammer's (2023) work, as an important post-

¹⁶ Another good reference about the structuralism in Latin America, also highlighted by Stockhammer (2023), is CEPAL (2016).

Keynesian author – interestingly also situated in England – seems to show the same theoretical interaction, but in the opposite direction. If, throughout this work, it has been demonstrated how the theoretical developments of the post-Keynesians from the Cambridge School influenced Furtado's economic thinking, Stockhammer's article raises the question of how Furtado's economic thinking may influence current post-Keynesian thought.

If post-Keynesian thought appears to have influenced Celso Furtado's thinking in the past, over the course of his extensive academic career, Furtado's ideas also seem to exert some influence on contemporary post-Keynesian thought. While the first of these two theoretical interactions is properly discussed and presented in this work, the second certainly deserves further investigation within a research agenda about structuralist and post-Keynesian strands of economic thought.

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